

UNCLASSIFIED

AD NUMBER

AD824621

LIMITATION CHANGES

TO:

Approved for public release; distribution is unlimited. Document partially illegible.

FROM:

Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; AUG 1966. Other requests shall be referred to Army Office of the Assistant Chief of Staff For Force Development, Attn: FOR-OT-RD, Washington, DC 20310. Document partially illegible. This document contains export-controlled technical data.

AUTHORITY

AGO, d/a ltr, 29 Apr 1980

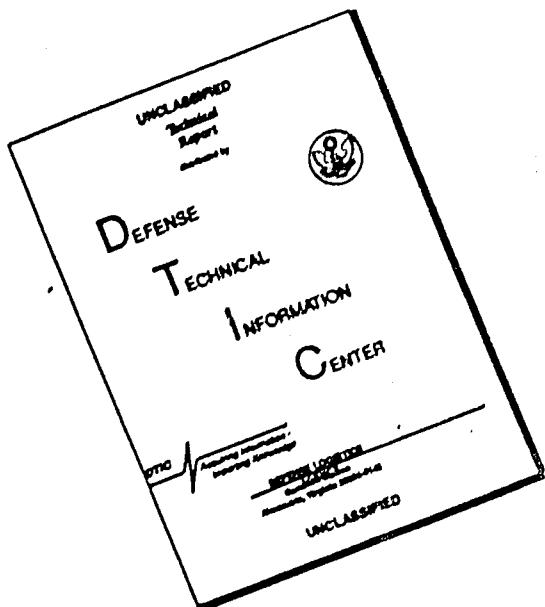
THIS PAGE IS UNCLASSIFIED

THIS REPORT HAS BEEN DELIMITED
AND CLEARED FOR PUBLIC RELEASE
UNDER DOD DIRECTIVE 5200.20 AND
NO RESTRICTIONS ARE IMPOSED UPON
ITS USE AND DISCLOSURE.

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED.

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST
QUALITY AVAILABLE. THE COPY
FURNISHED TO DTIC CONTAINED
A SIGNIFICANT NUMBER OF
PAGES WHICH DO NOT
REPRODUCE LEGIBLY.

AD 824621

EBA-CO

14 August 1966

HEADQUARTERS
168TH ENGINEER COMBAT BATTALION
APO US Forces 96227

SUBJECT: Operational Report of Lessons Learned for Period Beginning
1 May 1966, [Report Control Symbol CSGR0-28 (RI)]
(RCS CSFOR-65)

TO: SEE DISTRIBUTION

1. References:
 - a. AR 525-24
 - b. USARV Regulation 870-2
 - c. USARV Circular 870-1
 - d. 18th Engineer Brigade Regulation 870-1

2. Report is transmitted herewith in compliance with above referenced directives.

Edwin F. Pelosky
EDWIN F. PELOSKY
Lt Col, CE
Commanding

DISTRIBUTION:

- 1-CofS for Force Development, DA, Washington, D. C.
20310 (Thru Channels)
- 1-CofS for Force Development, DA, Washington, D. C.
20310 (Direct)
- 1-CG, USARPAC, APO US Forces 96558, ATTN: GPOP-MH
- 3-CG, USARV, ATTN: AVC
- 1-CG, 18th Engr Bde
- 2-Unit Files

16
STATEMENT #2 UNCLASSIFIED

This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of DEPT. OF ARMY

OFFICE OF ASST. CHIEF OF STAFF
FOR FORCE DEVELOPMENT

ATTN: "FOR-OT-RD"
WASH. D.C. 20310

FOR OT RD

660166

1st fl 6

JAN 2

42

OPERATIONAL REPORT ON LESSONS LEARNED
PERIOD BEGINNING 1 MAY 1966

SECTION I. SIGNIFICANT ORGANIZATIONAL ACTIVITIES

This report gives the historical activities of the 168th Engineer Combat Battalion over the period of time from 1 May 1966 to 1 August 1966. During this time the battalion was primarily involved in construction of four cantonment areas: Di An, Phu Loi, Lai Khe, and Phuoc Vinh in the Republic of Vietnam.

The battalion was operating under the operational control of the 159th Engineer Group (Const) until 20 July 1966 when it came under the 79th Engineer Group (Const).

On 1 May 1966 the 168th Engineer Combat Battalion Headquarters, Headquarters Company, and Company A were located at Di An. Company B was located at Lai Khe and Company C was located at Long Binh under the battalion's control for one month. Company C at Long Binh was transferred to the 588th Engineer Battalion on 1 June 1966. Company B of the 588th Engineer Battalion became Company C of the 168th Engineer Battalion. This gave the 168th Engineer Battalion the responsibility for the Phuoc Vinh cantonment area. On 4 May 1966 Company A minus one platoon and one squad from 3rd platoon moved to Phu Loi from Di An to begin construction of that cantonment.

Headquarters Company, one line platoon and one additional squad from Company A accomplished the construction work in the Di An area. Headquarters Company constructed 14 each 20' x 52' tropical billets of which 7 had roofs and the remainder tent covers. This was done through the self help program. The line platoon and squad constructed 3 each 70' x 140' prefab warehouses, 1 each 30' x 80' warehouse, 20 each 20' x 48' tropical buildings (mess halls, administrative buildings, etc), and latrines with a total of 15 holes.

Headquarters Company and the Company A platoon conducted thirteen (13) combat patrols during this time in the Di An area. These were ambush patrols at night and recon patrols during the day. They consisted of 1 Officer and 13 to 20 EM.

The battalion maintained a training program for all newly assigned personnel coming into the battalion during this time. Each staff section gave a presentation and then each man was given practical training on TOE weapons, M-79, and Claymore mines. There was a total of 200 men trained during this time.

Company A (-) at Phu Loi constructed 17 each 20' x 48' tropical buildings, 2 each 70' x 140' prefab warehouses, 3 each 20' x 50' prefab sheds, 5 each 30' x 80' hangers, and 1 each 20' x 48' quonset. They did construction work on the airfield control tower securing it with deadmen and placing glass in the tower. Work began on a signal conduit under the airfield and repair work on the airfield was continued throughout the 3 months. 2,000 square yards of runway was patched; 1,475 linear feet of culvert was placed; 6,000 linear feet of ditches was constructed; and latrines with a total of 201 holes and showers with a total of 22 heads.

OPERATIONAL REPORT ON LESSONS LEARNED (Cont)

Company A also maintained security on the laterite pit outside of the base perimeter. The company spent many hours clearing the laterite pit of mines emplaced by the VC.

Company B in Lai Khe did construction work both on the cantonment and airfield at Lai Khe. They constructed 19 each 20' x 48' tropical buildings, 6 each 20' x 52' tropical billets and worked continuously on airfield repair. The airfield at Lai Khe had exceeded its design life and PSP began failing. Company B placed 400 cubic yards of rock tailings in the areas of failure and repaired the PSP by welding it. Work could only be done during the evening because of excessive air traffic during daylight hours.

Company B was called upon to give combat support from 8 June - 24 June 1966 and maintained a perimeter security on a 24 hour basis. Twelve (12) man ambush patrols were sent out nightly to maintain security on the laterite pit. This detracted from the construction effort in June.

The Lai Khe area is isolated and received materials only by air or armed convoy. During the three month period only 4 convoys were conducted transporting a total of 4,319 tons of materials to the company.

Company C from 1 May 1966 until 1 June 1966 did construction work for the 168th Engineer Battalion in Long Binh. During that month they placed 11 concrete pads 20' x 52', 5 each 20' x 48' quonsets, 2 each 20' x 96' mess halls, 1 each 6 head shower, 1 each 4 hole latrine, and hauled a total of 2,130 cubic yards of laterite.

Beginning on 1 June 1966 the battalion began construction in the Phuoc Vinh area. A total of 6 miles of cantonment roads, 15 miles of ditches, and 1,300 ft of culvert was constructed. The only vertical construction accomplished was 1 each 20' x 48' quonset, 1 each 20' x 180' mess hall, 3 each 2 head showers, 1 each 2 hole latrine, 1 each 4 hole latrine, and 1 each 6 hole latrine. The company cleared 6 acres of land and did some construction on laterite tent pads. Because of the limited supplies, very little vertical construction was accomplished.

Convoys to Company C at Phuoc Vinh were a problem because of the men and equipment required to clear the road. Only 3 convoys were conducted in the 2 month period with a total of 1,500 tons of supplies. Another limiting factor in getting materials to the company at Phuoc Vinh was the fact that bridges along the route would not carry over a Class 20 lead. Consequently, the load on each truck was reduced.

Headquarters Company continued support of the letter companies in the various locations. The battalion supply section continued to draw supplies from two widely separated locations: Long Binh 15 miles to the east, and Saigon 18 miles to the southwest. (Materials hauled are limited due to the vehicles available in the battalion and 79th Engineer Group) Transportation received from other sources has been limited. Efficient usage of existing vehicles is further hampered by lack of sufficient loading equipment both at Class IV yards and in the battalion S-4 section.

OPERATIONAL REPORT ON LESSONS LEARNED (Cont)

The operations section continued the design of necessary structures (Maintenance hangers, billets, clubs, and water distribution systems for all base camp areas), organized and controlled supply convoys, directed construction, and allocated materials between the four base camp areas. Weekly staff visits to the three line companies continued and proved to be beneficial to the company, battalion staff, and base camp. Problem areas were taken care of and standards of construction were maintained because of these visits.

The battalion Maintenance section was challenged in maintaining a low deadline rate. It became difficult transporting large parts to the isolated companies.. Convoys once a month did not prove to be sufficient; therefore, helicopters were utilized. By use of the aircraft, the Maintenance section was able to accomplish its assigned mission.

The use of Vietnamese laborers was an important factor in increasing the productivity in each area to off-set the man hours of GI labor. The battalion had only 300 Vietnamese working prior to May but was increased to an average of 835. Many of these were trained to do skilled jobs as carpenters, masons, and helpers of different types. Jobs were accomplished in less time with this additional labor resource.

During this period of time 3 well drilling units were attached to drill water wells. The 171st Engineer Detachment (Well Drilling) was attached on 9 April, the 38th Engineer Detachment (Well Drilling) was attached on 19 June, and the 156th Engineer Detachment (Well Drilling) was attached on 13 July 1966. The 171st Engineer Detachment left the 168th Engineer Battalion on 13 Juno after completing a test well from which soil samples were taken and they also began well #2. They stopped at 80' where the 156th Engineer Detachment continued drilling to a depth of 170'. This well is waiting for a few components and it will be complete. A third well was drilled by the 38th Engineer Detachment in the battalion motor pool area and reached a depth of 160'. The 38th Engineer Detachmont was transferred to Lai Khe on 27 July 1966 to begin a well at Company B's location.

OPERATIONAL REPORT ON LESSONS LEARNED
PERIOD BEGINNING 1 MAY 1966

SECTION II. COMMANDER'S RECOMMENDATIONS AND OBSERVATIONS AND LESSONS LEARNED

PART I. Observations (Lessons Learned)

1. Hot Water Heater

a. Item: Hot Water Heater and Oil Burner Conversion

b. Discussion:

(1) A coal hot water heater, FSN 4520-265-8247, is the only water heater in Federal Stock Catalog C4500-1C-4 that has an oil burner conversion kit; however, the hot water heater was received without the kit. The latest stock manuals show that the kit is included.

(2) Hot water heaters of the electrical type are believed to be a better heater for the mess halls in the cantonment when electrical distribution systems are completed.

c. Observation: The stockage of coal hot water heater FSN 4520-265-8247 should be checked for the conversion kit. Recommend future planning should be to utilize the electrical type.

2. Hauling

a. Item: Gravel Haul

b. Discussion: Shortage of 5 ton dump trucks has caused difficulties in getting gravel to areas supplied by convoys. Convoys are usually infrequent because of the combat troops being committed for operations.

c. Observation: This unit has found that large wooden box type frames can be constructed and placed on 25 ton trailers to haul gravel. These boxes can carry a capacity of 15 tons. This allows areas that only have one resupply convoy a month to increase their construction effort.

3. Cooking Stoves

a. Item: Stove Parts

b. Discussion: Stove fire units for burners M-37 are continuously used and receive excessive wear. The stoves are not holding up to continuous usage. Repair parts have been found hard to receive because of their low priority.

c. Observation: A new stove should be developed to use on a continuous basis. The present stove should carry the following additional parts in stockage: manifold lines, leather or air pumps, generators, and filler tube caps.

OPERATIONAL REPORT ON LESSONS LEARNED

U.S. GOVERNMENT PRINTING OFFICE: 1968 10 16 100-100000

4. Electric Tools

a. Item: Electric Drills.

b. Discussion:

(1) A combat battalion does not have sufficient electrical drills in its TOE to accomplish construction tasks in cantonment areas.

(2) A 70' x 140' warehouse prefab requires two electrical drills and a total of 9 dozen drill bits. These items are not found to be readily available.

(3) Buildings requiring corrugated metal roofing and other prefabs require electric drills for effective speed in construction.

c. Observation: Combat battalions should prepare for the above mentioned missions with appropriate augmentation of 1/4 and 3/8 electric drills and drill bits. Manuals for prefab buildings should be available for planning purposes before the building arrives.

5. Concrete Placement

a. Item: Concrete Placement in Rain

b. Discussion: The rainy season has caused difficulties in placing concrete for large prefabricated buildings. Pouring operations at times cease because of intermittent rains and it is difficult to screed and float concrete that is already placed.

c. Observation: In 70' x 140' buildings where large quantities of concrete must be placed, an effective method is to place slabs and foundations for the walls leaving openings at door areas for drainage, then construct the building and complete pouring inside the building.

6. Lubrication Racks

a. Item: Grease Racks

b. Discussion: Maintenance facilities have found need for grease racks but lumber material is critical for other type construction. There is also a termite problem in some areas of Vietnam.

c. Observation: A masonry wall from 8" to 12" rock with rebar cross bracing, compacted fill, and a concrete top is a good substitute. Materials are readily available and Vietnamese labor can be utilized.

OPERATIONS: REPORT ON LESSONS LEARNED

7. Operations

a. Item: Combat Engineer Line Company Operations

b. Discussion: Combat engineer battalion line companies have been heavily taxed in construction and production control. Companies operating in areas distant from their battalions have had problems in effectively organizing for the maximum utilization of their personnel and equipment and have difficulty in preparing design changes.

c. Observation: It is recommended that an operations section be organized utilizing organic personnel consisting of the XO as Operations Officer, one selected NCO and an EM with prior drafting and/or typing experience.

8. Concrete Movement

a. Item: Concrete Wheelbarrows or Buggies

b. Discussion: Engineer combat companies which place concrete on projects have found difficulties in transporting concrete short distances. There is no organic equipment available appropriate for the job.

c. Observation: Units doing construction work should be augmented with the necessary wheelbarrows or buggies when possible or construct containers to carry concrete to area of placement. Recommend 4 each per line company.

9. Masonry

a. Item: Masonry Headwalls for Culverts

b. Discussion: Sand bags for headwalls have been found to be satisfactory for temporary placement but with large rains tend to wash out or rot over a short period of time.

c. Observation: A successful solution is to use large stone and place a masonry wall with mortar made of cement, lime, and water.

10. Water Dispensing Equipment

a. Item: Water Dispensing Equipment

b. Discussion: A shortage of water tankers has created a problem in transportation of water for concrete, compaction of roads, and airfields.

OPERATIONAL REPORT ON LESSONS LEARNED

c. Observation: Napalm containers have been found to be an excellent substitute by placing them on different type trailers. A 10 ton crane attachment trailer can carry 9 napalm containers, a $1\frac{1}{2}$ ton cargo trailer can carry 2, and a $2\frac{1}{2}$ ton pole trailer can carry 3. The water hauling capacity of a unit can be greatly increased.

11. Well Drilling

a. Item: Inability to Pull Well Casing With Drilling Rig

b. Discussion: The casing line of the drilling rig would not raise the drive pipe to expose the strainer in the aquifer. The TOE of the drilling rig did not include any heavy jacks which could be put under the slip ring to raise the casing. CT

c. Observation: Fifteen ton bridge jacks were borrowed from a panel bridge company and two jacks proved to be sufficient to raise the pipe.

12. Casing

a. Item: Well Casing Sticking in Well Hole

b. Discussion: When tight clay or sand strata was encountered at depths greater than 100', it became difficult to drive 8" casing.

c. Observation: Since the rig used was a percussion machine, the bit penetrated too fast and did not ream the hole enough. Remedy was to use a flatter angle on the face of the bit and set only 10 feet of casing at a time. This procedure prevented cave-in before the casing was set.

13. Tile Brick

a. Item: Four Hole Tile Brick

b. Discussion: There is a shortage of lumber in country as all lumber must be shipped from the US. Locally purchased 4 hole tile has proved to give fast and more economical construction.

c. Observation: Cost studies were made on the use of lumber vs the placing of a 3 foot tile wall and completing the building with lumber. Buildings with locally produced tile cost less when the hidden costs of transportation are considered. Tile bricks are readily available in many areas and assist in reducing the requirements for 2x and 1x lumber. Another advantage to the tile wall is the reduction of termite damage.

OPERATIONAL REPORT ON LESSONS LEARNED

14. Drainage

a. Item: Coefficient of Runoff

b. Discussion: When computing runoff based upon the rational formula, $Q = CIA$, the value picked for C should be based upon what the area will look like when all construction is completed.

c. Observation: The following values were found to work successfully for this unit: for troop and administration areas $C = 0.9$; for roads, airfields and hardstands, value was $C = 1.0$.

15. Culverts

a. Item: Culvert Size

b. Discussion: The nature of the soil is such that rapid silting of culverts reduces the effective opening and limits the amount of runoff that the culvert can carry.

c. Observation: The 12" culvert should not be used where the soil is of a high silt content.

16. Conservation of Concrete

a. Item: Concrete "O Ring"

b. Discussion: Aggregate was found to be a critical supply item in isolated areas because of the difficulty in transporting it. It was necessary to reduce the amount of concrete placed in each building to keep construction on buildings continuing. A continuous concrete footer was poured 2 feet wide around the outside edge of the building forming an "O Ring".

c. Observation: The "O Ring" worked very successfully and allowed the vertical construction of the buildings to continue. The forming time was reduced because of the smaller amount of earthwork required. The remainder of the floor will be poured at a later date when the materials are available.

17. Combat Support Missions

a. Item: Support of Combat Operations on Short Notice

b. Discussion: Companies may be called upon to support a combat operation by opening up a road on short notice. Often they are lacking the proper equipment or materials in the proper configuration to complete the mission on time. The principal items involved were corrugated metal culvert and filled sandbags.

OPERATIONAL REPORT ON LESSONS LEARNED

c. Observation: Recommendation is that a supply of filled sand bags and pre-assembled culverts be kept on hand to support, on a moment's notice, any road opening operation. The most flexible size of culvert to use is 24" and the most practical length is 25' since it can then be hauled on a pole trailer.

18. Dust Control

a. Item: Use of a Dust Palliative Around the Airstrip and Helipads

b. Discussion: Airfield and helipads are built upon the natural soil as a subgrade; consequently, the shoulders, ditch slopes, and ditches are composed of laterite or a fine silt common in this area. The prop blasts of fixed wing aircraft and rotary blade action of helicopters makes dust a real problem. Some success has been achieved by treating these dusty areas with MC-0 on two shootings and one with RC-3.

c. Observation: The dust palliative works quite well but one difficulty was encountered: the ditch slopes draining the area are quite steep since the ditches must be wide and deep to handle the drainage. Dust palliative on these steep slopes erodes very soon after placement. It is recommended that ditch slopes be kept as gentle as possible when this treatment is used.

19. Sumps for Showers and Mess Halls

a. Item: Critical Supply of Rock

b. Discussion: Gravel or uncrushed rock was found to be a constant critical supply item. Issuing gravel or uncrushed rock for sums would hamper the number of concrete pads scheduled for pouring.

c. Observation: Crushed beer cans were found to be an acceptable substitute. To increase the life span of the sump, aluminum cans were used and they were placed upside down.

Part II. Recommendations

The main mission for this battalion during this period was cantonment construction. The commitment of companies for combat support missions has caused a slight delay in the overall construction schedules. On one occasion a whole company was directed for perimeter security before all the Infantry Brigade assets were utilized. Since this battalion hires local laborers to augment its effort, supervision was lacking. This, then, resulted in a large manpower pool, without receiving maximum utilization towards productive goals.

OPERATIONAL REPORT ON LESSONS LEARNED

Utilization of Vietnamese labor can be used most successfully. We have found that the efficiency of our battalion has been increased several times by permanent and temporary hire. To state a factual example, difficulty arose at one new company location and few local people created a construction deficit in comparison to other companies. By assessing the procurement problem, the District and Province Chiefs were contacted and a series of meetings followed which made more laborers available. A group of skilled laborers were slowly acquired and production doubled. The cost and efficiency comparison between soldiers and Vietnamese laborers is more economical with the latter. Skills in the construction field have been masons, carpenters, mechanics, concrete finishers, and ordinary ditch diggers. Other hires are clerks, typists, KP's, and trained police women. Since a large number of ditch diggers and common laborers are women, the latter is essential for discipline and searching for weapons and stopping small pilferage. All laborers are broken into packets with 10 - 15 each and a leader designated. Each packet is controlled by one soldier that coordinates the activity and provides supervision. It is estimated that it takes $2\frac{1}{2}$ Vietnamese to produce the work of one soldier, but the results speak for itself.

The dispersion of our companies with Infantry Brigades has created transportation and communication problems. Two companies can only be reached by helicopter or armed convoy in moving construction supplies and equipment. The transportation difficulty has been partially overcome by programming and scheduling well in advance. This consists of close coordination with the Division as to their long range plans and knowing the commander's wishes. The communication difficulty has been solved to the four base camps by radio relay. Dependability of telephones is still marginal and expected to improve. Critical repair parts and passengers to the isolated camps are transported by HU1B aircraft. We are still experiencing difficulty in transporting critical bulk Class IV items by air and no relief is in sight. Basically, a combat engineer battalion with its organic capability cannot move tons of lumber, cement, sand, aggregate, tin, etc, without outside assistance. The problem is further aggravated by no set schedule for convoys, and we seldom receive more than a 24 hour notice. This problem is being overcome by Group providing as much assets within its capabilities and the individual Infantry Brigade stripping their units of all $2\frac{1}{2}$ ton cargo trucks. Coordination and cooperation by all elements is essential.

By changing areas of responsibility so each combat battalion could support a division, a decision was made to switch companies on paper. Two months has elapsed and the efficiency lost during this period could have been gained by physically moving the whole company. Companies are accustomed to operating under battalion methods and have difficulty in adjusting to another. Most of the trucks, scoop loaders, air compressors, and tractors were exchanged so that there would be uniformity throughout the battalion and be less difficulty in procuring repair parts. Recommend that switching of companies not be considered in the future because there is not sufficient time to stop, think, and learn new methods.

OPERATIONAL REPORT ON LESSONS LEARNED

The self help program assists many units to construct facilities that would take our troops a longer time to provide. If properly supervised, units can achieve relatively the same standards as engineer troops. Infantry units normally cannot perform as much self help as support troops; however, by adjusting the construction schedule, more emphasis is placed on Infantry battalion areas. One difficulty with the self help program is the amount of construction materials available. Periodically we cannot issue materials in sufficient quantities as none would be available to keep our engineer troops and local laborers active. This situation is alleviating itself as more materials become available. Periodically units desire material to construct structures that are not austere or prescribed in existing regulations. With tactful company commanders, a customer is informed and explained the procedure for self help construction and thereby everyone avoids unpleasant situations or "after the fact" explanations.

EGE-3 (14 Aug 66)

1st Ind

SUBJECT: Operational Report of Lessons Learned for Period Beginning
1 May 1966, Report Control Symbol CSGPO-28 (R-1)

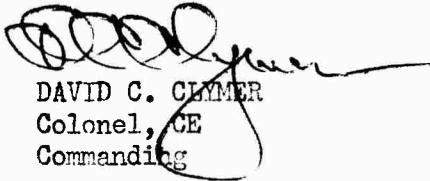
Headquarters, 79th Engineer Group (Construction), APO 96491, 20 August 1966

1. The basic communication is forwarded in accordance with USARV
Reg 870-2.

2. I concur with the recommendations and observations of the CO,
168th Engineer Battalion. A copy of this document has been provided to all
subordinate units in this command and to battalions programmed in to this
command. The following specific comments are made:

a. Electric Drills: This headquarters is preparing correspondence
to subordinate battalions recommending that they initiate a request for
these items on a USARV Form 47.

b. Concrete Wheelbarrows or Buggies: This headquarters believes
that concrete buggies are superior to wheelbarrows for the handling of
concrete. It is recommended that action be taken at the appropriate level
to procure these items and make them available in the supply system. This
procurement should be based upon furnishing a minimum of twelve buggies
per engineer line company.


DAVID C. CLYMER
Colonel, CE
Commanding

Copy furnished:
CO, 168th Engr Bn

EGE-3 (14 Aug 66)

1st Ind

SUBJECT: Operational Report of Lessons Learned for Period Beginning
1 May 1966, Report Control Symbol CSGPO-28 (R-1)

Headquarters, 79th Engineer Group (Construction), APO 96491, 20 August 1966

1. The basic communication is forwarded in accordance with USARV
Reg 870-2.

2. I concur with the recommendations and observations of the CO,
168th Engineer Battalion. A copy of this document has been provided to all
subordinate units in this command and to battalions programmed in to this
command. The following specific comments are made:

a. Electric Drills: This headquarters is preparing correspondence
to subordinate battalions recommending that they initiate a request for
these items on a USARV Form 47.

b. Concrete Wheelbarrows or Buggies: This headquarters believes
that concrete buggies are superior to wheelbarrows for the handling of
concrete. It is recommended that action be taken at the appropriate level
to procure these items and make them available in the supply system. This
procurement should be based upon furnishing a minimum of twelve buggies
per engineer line company.

DAVID C. CLYMER
Colonel, CE
Commanding

Copy furnished:
CO, 168th Engr Bn

AVBC-CG (14 Aug 66)

2d Ind

27 August 1966

SUBJECT: Operational Report-Lessons Learned for Period 1 May 1966 to 31 July 1966 (RCS CSFOR-65)

Vietnam environment.

(a) It can alleviate the rotational hump for two battalions at the completion of twelve months in-country.

(b) The detailed acquired knowledge of the ground of the ground and local commanders is retained in the working unit. This is particularly important where political authorities are intimately involved in construction and real estate operations, as is true in South Vietnam.

(c) The time and effort expended in reestablishment of camps, usually at least a week for a company sized engineer unit in this environment can be saved in part. Where engineer effort is critically short this factor carries much weight.

R. R. Ploger Col (E) Deputy
R. R. PLOGER
Brigadier General, USA
Commanding

14

AVHGC-DH (14 August 1966)

3d Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending
31 July 1966 (RCS CSFOR-65)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96307

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-OT
APO 96558

1. The Operational Report-Lessons Learned submitted by the 168th Engineer Combat Battalion for the quarterly period ending 31 July 1966 is forwarded herewith.

2. Concur with the comments contained in the basic report and the preceding indorsements.

3. Reference Section II, Part I, Paragraph 1, Hot Water Heater: Inspection of hot water heater units to insure that all components and conversion kits are present is a normal depot function. However, in a combat theater many desirable functions are not performed. The 18th Engineer Brigade has been directed to seek corrective action from the supply source concerned.

4. Reference Section II, Part I, Paragraph 2, Gravel Haul: For several months 5-ton dump trucks have been in short supply. Since the submission of the basic report, 18 additional 5-ton dump trucks have been issued to the 18th Engineer Brigade. There is no objection to using wooden frames as described providing the load does not exceed the rated capability of the trailer.

5. Reference Section II, Part I, Paragraph 3, Cooking Stoves: Presently, the new M-2 fire unit and repair parts are being issued to some CONUS units. It is expected that an increasing number of deploying units will arrive RVN equipped with the M-2 range. Currently, residual stocks of M-37 ranges and repair parts are being consolidated in CONUS for shipment to RVN. Repair parts for the M-2 range will be available in RVN within 60-90 days. Total replacement of the M-37 range is scheduled commensurate with the requirement to exhaust present M-37 stocks.

6. Reference Section II, Part I, Paragraph 8, Concrete Movement: 18th Engineer Brigade has been directed to submit a USARV Form 47.

7. Reference Section II, Part I, Paragraph 11, Well Drilling: 18th Engineer Brigade has been directed to submit USARV Form 47; however, if the lack of jacks is a "set" deficiency, an MTOE should be submitted also.

AVHGC-DH (14 August 1966)

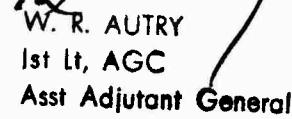
3d Ind

18 NOV '66

SUBJECT: Operational Report-Lessons Learned for the Period Ending 31
July 1966 (RCS CSFOR-65)

8. Reference Section II, Part I, Paragraph 19, Sumps for Showers and Mess Halls: Known requirements for crushed rock in RVN to accomplish FY 66 construction totals over 4 million cubic yards. Rock, crushed and uncrushed, is in short supply and will continue to be critical for some time. Additional rock crushing capability is programmed for RVN.

FOR THE COMMANDER:


W. R. AUTRY
1st Lt, AGC
Asst Adjutant General

1 Incl
nc

GPOP-OT(14 Aug 66) 4th Ind
SUBJECT: Operational Report-Lessons Learned for the Period Ending
31 July 1966 (RCS CSFOR-65)

HQ, US ARMY, PACIFIC, APO San Francisco 96558 9 DEC 1966

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters concurs in the basic report as indorsed.

FOR THE COMMANDER IN CHIEF:

G. L. McMULLIN
G. L. McMULLIN
CPT, AGC
Asst AG